CURRICULUM VITAE

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PRESENT POSITION:
Principal Scientist
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EDUCATION:

1989 B.S. in Biology, Radford University, Radford, VA

1991-1995 M.S. in Biomedical Sciences, Hood College, Frederick, MD
Thesis: "Characterization of DMB Polymorphism".
Advisor: Dr. Mary Carrington

1994-1996 Ph.D. candidate in Genetics, The George Washington University

1998 Ph.D. in Biology/Molecular Evolutionary Genetics, The Pennsylvania State University, University Park, PA. Thesis: "Peptide Binding Function and MHC Evolution". Advisor: Dr. Austin Hughes.

HONORS AND AWARDS:

1995 National Institutes of Health Predoctoral Intramural Research Training Award

1998 Gordon Conference in Molecular Evolution/Sloan Foundation Travel Award

1998 Student Travel Award, Institute of Molecular Evolutionary Genetics, Penn State University

INVITED LECTURES:

8/97 Yeager M and Hughes Al. "MHC Evolution, Peptide Binding and Implications in Disease Associations". American Red Cross National Histocompatibility Laboratory, Baltimore, MD.

9/97 Yeager M, Kumar S and Hughes AL. "Sequence convergence in the peptide binding region of primate and rodent MHC Class Ib molecules". Inte-

grative Biosciences Immunobiology Meeting, Department of Microbiology and Immunology, The Pennsylvania State University College of Medicine, Hershey, PA.

10/97 Yeager M, Kumar S and Hughes AL. "Sequence convergence in the peptide binding region of primate and rodent MHC Ib molecules". Departments of Biology/Biochemistry and Molecular Biology Joint Symposium, The Pennsylvania State University, PA.

10/97 Yeager M. "MHC involvement in autoimmune and infectious diseases". Advanced Genetics Course, The Pennsylvania State University, University Park, PA.

02/98 Yeager M, Carrington M and Hughes AL. "Class I and Class II MHC bind self peptide sets that are strikingly different in their evolutionary characteristics". Department of Pathology and Laboratory Medicine, University of Wisconsin Madison.

03/97 Yeager M and Hughes AL. "MHC Evolution, Peptide Binding and Implications in Disease Associations". Neuroimmunology Section, Department of Neurology, Washington University School of Medicine, St. Louis, MO.

10/99 Yeager M. "MHC Evolution". Evolution Course, University of Maryland, College Park, MD.

10/02 Yeager M. "The SNP500 Cancer Database and Candidate SNP Approach to Genetic Association Studies". The Lennox K. Black Symposium- "Genomics and Bioinformatics for the Advancement of Clinical Science", Thomas Jefferson University, Philadelphia, PA.

PUBLICATIONS:

1. Carrington M, Yeager M and Mann D. Characterization of HLA-DM polymorphism. *Immunogenetics* 38:446-449,1993.

2. Yeager M and Hughes AL. Trans-specific polymorphism vs. independent evolution of Class II MHC sequence motifs. Proc. 12th IHWC Genetic Diversity of HLA. 1996.

3. Yeager M and Hughes AL. Interallelic recombination has not played a major role in the history of the HLA-C locus. *Immunogenetics* 44:128-133,1996.

4. Hughes AL, Yeager M and Carrington M. Peptide binding function and the

paradox of HLA disease associations. *Immunol. Cell. Biol.* 74:444-448, 1996.

5. Yeager M, Kumar S and Hughes AL. Sequence convergence in the peptide binding region of primate and rodent MHC Class Ib molecules. *Mol. Biol. Evol.* 14:1035-1041,1997.

6. Hughes AL and Yeager M. Molecular Evolution of the Vertebrate Immune System. *Bioessays* 19:777-786, 1997.

7. Hughes AL and Yeager M. Coordinated amino acid changes in the evolution of mammalian defensins. *J. Mol. Evol.* 44:675-682,1997.

8. Hughes AL and Yeager M. Comparative evolutionary rates of mammalian introns and exons. *J. Mol. Evol.* 45:125-130,1997.

9. Evans DT, Piekarczyk MS, Allen TM, Boyson JE, Yeager M, Hughes AL, Gotch FM, Hinshaw VS and Watkins DI. Immunodominance of a single CTL epitope in a primate species with limited MHC Class I polymorphism. *J. Immuno.* 159:1374-1382,1997.

10. Cavidad LF, Shufflebotham C, Ruiz FJ, Yeager M, Hughes AL and Watkins DI. Unusual Post-Species Evolution of the MHC Class I loci in New World Primates. *Proc. Natl. Acad. Sci. USA* 94:14536-14541,1997.

11. Hughes AL and Yeager M. Natural selection at major histocompatibility loci of vertebrates. *Annu. Rev. Genet.* 32:415-435,1998.

12. Hughes AL and Yeager M. Natural selection and the evolutionary history of major histocompatibility complex loci. *Front. Biosci.* 3:d509-516,1998.

13. Yeager M and Hughes AL. Evolution of the mammalian MHC: natural selection, recombination, and convergent evolution. *Immunol. Rev.* 167:45-58,1998.

14. Hughes AL, Yeager M, Ten Elshof AE and Chorney MJ. A new taxonomy of mammalian MHC Class I molecules. *Immuol. Today* 20:22-26,1999.

15. Hughes AL and Yeager M. Coevolution of the mammalian chemokines and their receptors. *Immunogenetics* 49:115-124,1999.

16. Yeager M, Carrington M and Hughes AL. Class I and Class II MHC bind self peptide sets that are strikingly different in their evolutionary characteristics. *Immunogenetics* 51:8-15,2000.

17. Bergen AW*, van den Bree MBM*, Yeager M, Ganjei JK, Welch R, Haque K, Bacanu S, Berrettini WH, Grice DE, Bulik CM, Fichter M, Halmi K, Kaplan A, Strober M, Treasure J, Woodside B and Kaye WH. Candidate genes for anorexia nervosa in the 1p34-36 linkage region: both serotonin 1D and delta opioid receptors display significant association to anorexia nervosa. *Molecular Psychiatry*, 8(4);397-406, 2003.

18. Bergen AW*, Yeager MA*, Welch R, Haque K, van den Bree MBM, Ganjei JK, Mazzanti C, Goldman D, Berrettini WH, Bulik CM, Fichter M, Halmi K, Kaplan A, Strober M, Treasure J, Woodside B and Kaye WH. Evidence of association of DRD2 with anorexia nervosa. *Molecular Pscyhiatry*, submitted, 2002.

19. Welch R, Yeager M, Packer B, Miller E, Kiley M, Burke M, Haque K, Larson S, Yadavalli S and Chanock SJ. SNP Genotyping Validation: A comprehensive study of sequence variation across multiple typing platforms. *In Prep.*

20. Yeager M, Welch R, Haque K, Ganjei JK and Bergen AW. Comparative analysis of neuropsychiatric candidate genes. *In Prep.*

21. Yeager M, Packer B, Miller E, Welch R, Kiley M, Burke M, Strausberg R, Rothman N and Chanock SJ. SNP500 Cancer Database and Candidate SNP Approach to Genetic Association Studies. *In Prep.*

22. Haque KA, Beerman MB, Pfeiffer RM, Struewing JP, Chanock SJ, Bergen AW. Performance of High-Throughput DNA Quantification Methods. *BMC Biotechnol*, 28:3(1):20, 2003.

23. Hughes AL, Packer B, Welch R, Bergen A, Chanock SJ, Yeager M. Widespread Purifying Selection at Polymorphic Sites in Human Protein-Coding Loci. *PNAS*, 100(26): 15754-15757,2003.

24. Packer BR, Yeager M, Staats B, Welch R, Crenshaw A, Kiley M, Eckert A, Beerman M, Miller E, Bergen A, Rothman N, Strausberg R, Chanock SJ. SNP500Cancer: a public resource for sequence validation and assay development for genetic variation in candidate genes. *Nuc Acids Res*, 32:D528-D532, 2004

25. Lan Q, Mumford JL, Shen M, Bonner MR, He X, Yeager M, Welch R, Chanock S, Tian L, DeMarini DM, Chapman RS, Zheng T, Keohavong P, Caporaso N, Rothman N. Genetic Polymorphisms in the Oxidative Damage-Related Genes *AKR1C3 and OGG1*, Exposure to Indoor Smoky Coal Emissions, and Risk of Lung Cancer in Xuan Wei, China. *Cancer Res*, In submission, 2004.

* these authors contributed equally

PRESENTATIONS AND ABSTRACTS:

1. Yeager M and Carrington M. "Characterization of HLA-DMA and –DMB", American Society of Histocompatibility and Immunogenetics, Annual Meeting, Kansas City, MO, October 1992.

2. Yeager M and O'Brien SJ. "MHC Evolution and Disease Associations". Graduate Student Biomedical Research Day, The George Washington University, March 1995.

3. Yeager M. "Evolution of Class I MHC in humans". NOAHS Annual Meeting, Front Royal, VA, May 1995.

4. Yeager M and Hughes AL. "Trans-species polymorphism vs. independent evolution of Class II MHC sequence motifs". 12th International Histocompatibility Conference, Paris, France, June 1996.

5. Yeager M, Kumar S and Hughes AL. "Sequence convergence in the peptide Binding region suggests a shared function of primate and rodent MHC Class Ib molecules". The Fifth International Workshop on MHC Evolution, Visby, Gotland, Sweden, May 1997.

6. Yeager M, Kumar S and Hughes Al. "Sequence convergence in the peptide binding region of primate and rodent MHC Class Ib molecules". Gordon conference in Molecular Evolution, Ventura, CA, January 1998.

7. Welch R, Yeager M, Yadavilla S, Glaser C, Larson S, Packer B, Miller E, Kiley M, Burke M, Crenshaw A, Bergen AW and Chanock SJ. Comparative Analysis of High-Throughput Genotyping Methods, Rej, SNP2002.

8. Yeager M, Packer B, Miller E, Welch R, Kiley M, Burke M, Strausberg R, Rothman N and Chanock SJ. SNP500 Cancer Database and Candidate SNP Approach to Genetic Association Studies. American Society of Human Genetics 52nd Annual Meeting, Baltimore, MD, October 2002.

9. Bergen AW, Yeager M, Welch R, Haque K, Mazzanti C, Kaye WH, and the Price Foundation Collaborative Group. Dopamine D2 Plymorphisms and Anorexia Nervosa. Oral Presentation at the Eating Disorder Research Society Annual Meeting, Charleston, SC. November 2002. Abstract # 8206.

10. Yeager M, Packer B, Staats B, Welch R, Crenshaw A, Kiley M, Eckert A, Beerman M, Miller E, Bergen A, Rothman N, Strausberg R, Chanock S. SNP500Cancer database: Sequence Validation and Assay Optimization of Candidate Gene SNPs for Molecular Epidemiology Studies in Cancer. Poster Presentation at the 6th International Meeting on Single Nucleotide Polymorphism And Complex Genome Analysis, Chantilly, VA. November 2003. Abstract # 116.

11. Lan Q, Zhang L, Li G, Vermeulen R, Chanock S*, Yeager M, Dosemeci M, Hayes R, Linet M, Skibola C, Yin S, Smith M, Rothman N. The MPO –463 G-> A Polymorphism and Benzene Hemtoxicity. Poster Presentation at the AACR Conference, Orlando, FL. March 2004. Abstract # 1120.

12. Huang W, Berndt SI, Chatterjee N, Chanock SJ*, Yeager M, Welch R, Weissfeld JL, Bresalier RS, Hayes RB. Nucleotide Excision Repair Polymorphisms and Risk for Colorectal Adenoma. Poster Presentation at the AACR Conference, Orlando, FL. March 2004. Abstract # 1494.

13. Butler MA, Ruder AM, Carreon T, Waters MA, Yeager M, Welch R, Chanock S*, Schulte PA. Polymorphisms in the Estrogen Metabolism Genes CYP17, CYP1B1, CYP1A2, COMT and ER Alpha and Susceptibility to Primary Intracranial Brain Gliomas in Women. Poster Presentation at the AACR Conference, Orlando, FL. March 2004. Abstract # 4511.

14. Moore LE, Huang W, Chanock S*, Yeager-Jeffery M, Pinsky P, Weissfeld J, Hayes R. Risk of Advanced Adenoma Associated with GSTM1, GSTT1, and Two GSTP1 Genotypes and Cigarette Smoking in the Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial. Poster Presentation at the AACR Conference, Orlando, FL. March 2004. Abstract # 4519.

15. Garcia-Closas M, Malats N, Real FX, Kogevinas M, Silverman D, Yeager M, Welch R, Chanock S*, Hein DW, Garcia-Closas R, Serra C, Tardón A, Carrato A, Samanic C, Dosemeci M, Rothman N. *NAT2* Slow Acetylation and GSTM1 Null Genotype Increase Bladder Cancer Risk: Confirmatory Results from the Spanish Bladder Cancer Study. Presentation at the AACR Conference, Orlando FL. March 2004. Abstract # 5284.

* Poster/Abstracts Presented by